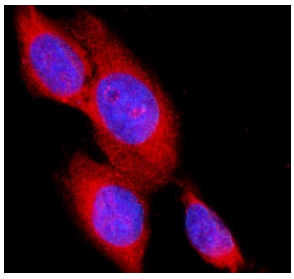
ACVR2A Antibody (R32495)

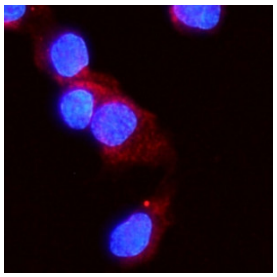
Catalog No.	Formulation	Size
R32495	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

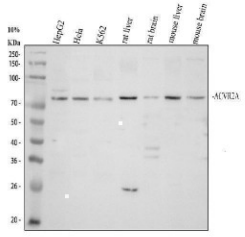
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P27037
Localization	Cytoplasmic, membranous
Applications	Western blot: 0.5-1ug/ml Immunofluorescence (FFPE): 5ug/ml Flow cytometry: 1-3ug/million cells
Limitations	This ACVR2A antibody is available for research use only.



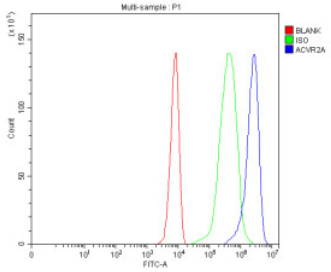
ACVR2A Antibody Human Osteosarcoma Cell IF. Immunofluorescent staining of U-2 OS human osteosarcoma cells following enzyme-mediated antigen retrieval demonstrated ACVR2A localization with the primary antibody (red), while nuclei were counterstained with DAPI (blue). The staining shows prominent cytoplasmic and membranous expression with enrichment around the cell periphery, consistent with the expected distribution of this transmembrane activin receptor. These results support the use of ACVR2A Antibody, an Activin Type II Receptor Antibody, for immunofluorescent detection of ACVR2A expression in cultured human osteosarcoma cells.



ACVR2A Antibody Rat Kidney Cell IF. Immunofluorescent staining of FFPE rat NRK cells following heat-induced epitope retrieval in pH6 citrate buffer identified ACVR2A with the primary antibody (red), while nuclei were counterstained with DAPI (blue). The staining demonstrates predominantly cytoplasmic and membranous localization with perinuclear enrichment, consistent with the expected distribution of this transmembrane activin receptor. The clear cellular signal supports the use of ACVR2A Antibody, an Activin Type II Receptor Antibody, for immunofluorescent detection of ACVR2A expression in FFPE cell preparations.



ACVR2A Antibody Human, Rat and Mouse WB. Western blot analysis detected ACVR2A in human HepG2, HeLa, and K562 cell lysates (lanes 1-3), rat liver and brain tissue lysates (lanes 4-5), and mouse liver and brain tissue lysates (lanes 6-7). A predominant immunoreactive band is observed at approximately 65-90 kDa, which migrates above the predicted molecular weight of 58 kDa. This upward shift is consistent with the extensive glycosylation known to occur on ACVR2A, a cell surface transmembrane receptor, and may also reflect other post-translational modifications. ACVR2A Antibody, an Activin Type II Receptor Antibody, demonstrates cross-reactive detection across human, rat, and mouse samples by Western blot.



ACVR2A Antibody Human Liver Cell FACS. Flow cytometric analysis of fixed HepG2 human liver cells demonstrated a distinct rightward shift in fluorescence intensity for cells stained with ACVR2A antibody (blue) compared with the isotype control (green) and unstained control (red), indicating specific detection of ACVR2A. These results support the use of ACVR2A Antibody, an Activin Type II Receptor Antibody, for flow cytometric analysis of ACVR2A expression in cultured human liver cells.

Description

ACVR2A Antibody recognizes activin receptor type 2A (ACVR2A), a transmembrane serine/threonine kinase receptor belonging to the transforming growth factor beta receptor superfamily. ACVR2A serves as a primary receptor for activins and several related ligands, initiating signaling pathways that regulate cellular proliferation, differentiation, apoptosis, tissue development, and homeostasis. Upon ligand binding, ACVR2A forms heteromeric complexes with type I receptors, resulting in phosphorylation events that activate SMAD-dependent transcriptional programs. The receptor is widely expressed in epithelial tissues, reproductive organs, endocrine tissues, and the gastrointestinal tract, where it contributes to normal development and maintenance of tissue integrity. NSJ Bioreagents provides high-quality ACVR2A Antibody reagents for researchers investigating activin signaling, developmental biology, and transforming growth factor beta superfamily pathways.

As an Activin Type II Receptor Antibody target, ACVR2A plays an essential role in regulating embryonic patterning, reproductive physiology, stem cell fate, and organ development. Activin signaling mediated through ACVR2A influences folliculogenesis, spermatogenesis, skeletal muscle maintenance, immune regulation, and endocrine function while coordinating communication between epithelial and stromal compartments. Downstream activation of SMAD2 and SMAD3 signaling regulates the transcription of numerous genes involved in cell cycle control, differentiation, extracellular matrix remodeling, and cellular responses to environmental cues. Because ACVR2A occupies a central position within the activin signaling cascade, a ACVR2A Antibody is widely used to investigate receptor expression, ligand responsiveness, and pathway regulation in both normal physiology and experimental disease models.

Alterations in ACVR2A expression or function have been implicated in numerous human diseases, particularly colorectal cancer, gastric cancer, pancreatic cancer, endometrial cancer, and hepatocellular carcinoma. In colorectal tumors exhibiting microsatellite instability, frameshift mutations in ACVR2A represent one of the most frequently observed genetic alterations, disrupting activin-mediated growth inhibition and contributing to tumor progression. Beyond oncology,

ACVR2A has been investigated in studies of reproductive disorders, fibrosis, inflammation, cardiovascular biology, muscle wasting, and developmental abnormalities. Consequently, the Activin Type II Receptor Antibody is an important reagent for researchers examining transforming growth factor beta signaling, receptor biology, cancer mechanisms, tissue remodeling, and developmental regulation.

A ACVR2A Antibody / Activin Type II Receptor Antibody is commonly used to evaluate receptor expression and localization in cultured cells and tissue specimens while supporting investigations of activin signaling, receptor complex formation, developmental biology, and disease-associated pathway dysregulation. These studies contribute to a better understanding of growth factor signaling networks and their roles in normal physiology and pathological conditions. NSJ Bioreagents provides carefully validated antibodies to support reliable and reproducible detection of ACVR2A across a broad range of experimental models. An ACVR2A Antibody / Activin Type II Receptor Antibody is a valuable research reagent for investigating activin signaling, transforming growth factor beta receptor biology, tissue development, cancer progression, and cellular differentiation.

Explore our Signal Transduction Antibodies page to discover validated antibodies for ACVR2A and other proteins involved in activin signaling, receptor-mediated signal transduction, cellular differentiation, tissue development, and cancer biology.

Application Notes

Differences in protocols and secondary/substrate sensitivity may require the ACVR2A antibody to be titrated for optimal performance.

Immunogen

Amino acids Q421-L513 from the human protein were used as the immunogen for the ACVR2A antibody.

Storage

After reconstitution, the ACVR2A antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

ACVR2A antibody, Activin Type II Receptor antibody, Activin Receptor Type 2A antibody, ACTRIIA antibody, Activin Receptor IIA antibody, Activin Receptor Type IIA antibody

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